United States Environmental Protection Agency
Region 5
POLLUTION REPORT

Date: Tuesday, March 09, 2004
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Subject: BASF MDI Spill - Initial/Final POLREP
BASF MDI Spill
1609 Biddle Avenue, Wyandotte, MI

POLREP No.:	1	**Site #:**	05ZZ
Reporting Period:	2/6/2004 to 3/5/2004	**D.O. #:**	
Start Date:	3/6/2004	**Response Authority:**	CERCLA
Mob Date:		**Response Type:**	Emergency
Completion Date:	3/5/2004	**NPL Status:**	Non NPL
CERCLIS ID #:		**Incident Category:**	Removal Action
RCRIS ID #:		**Contract #**	

Site Description
1) Site Location

The incident occurred at the BASF Facility located at 1609 Biddle Avenue in Wyandotte, Wayne County, Michigan. The facility is located in a mixed light industry/commercial/residential neighborhood. The facility is bordered to the north by Perry Place, to the west by Biddle Avenue, to the south by Alkali Street and to the east by the Detroit River.

2) Description of Threat

On February 6, 2004, BASF notified the National Response Center (NRC) of a hazardous substance release of methylene bis(phenyl) diisocyanate (MDI) from a rail car at their Wyandotte facility. The NIOSH TWA for MDI is 0.005 ppm and the OSHA Ceiling is 0.02 ppm. The product was released from the rail car from multiple points from the outer shell and continued to spill until the remaining product in the car could be removed. BASF personnel conducted chemical specific air monitoring at and around the spill location for

MDI vapors. Due to the low temperature, high humidity, and low vapor pressure of the MDI, no hazardous vapors were detected.

Exposure to MDI mists and vapors can result in breathlessness, chest discomfort and reduced pulmonary function. Long-term exposure can cause lung damage.

Current Activities

1) Current Situation

BASF and their contractors have completed the remediation of the spill location. Approximately 240 cubic yards of contaminated railroad ballast and soil was excavated and 40,000 gallons of impacted water was collected and sent to EQ Michigan Wayne Disposal for final disposition. In addition, approxiamtely 60 55-gallon drums containing sorbents, MDI and other impacted materials remain on site awaiting incineration. Approximatley 155,000 pounds of the product was salvaged into 23 200-gallon totes and into another rail car. The remaining 38,000 lbs. was lost to the ground. Based on the composition of the product (38% MDI), 14,400 lbs. was considered MDI. The reportable quantity for MDI is 5,000 lbs.

The rail car was inerted with steam and impacted insolation between the inner and outer vessels was removed. The car was then released by the Federal Rail Administration to GATX (the owner of the rail car) to be relocated to Sarnia, Canada, for an inspection as to the cause of the release.

BASF theorized that the relases was caused by a failure in the steam heating loop system of the rail car. Specifically, condensate from the steam collected in a dead leg in the system. Although not confirmed BASF inpsected all the isocyante rail cars in their fleet as a precaution.

2) Site Actvities to Date

Summary of Response Actions Between 2/6/04 and 3/3/03:

On February 6, 2004, BASF detected a leak in a rail car containing approximately 190,000 pounds of Lupranate(R) M-20S which is composed of 38% MDI. The material is solid below 40 deg. F and steamed is applied to the rail car to liquify the material for off loading. As the rail car was heated leaks were observed throughout the outer shell of the rail car. Steam was removed from the car to allow the material to solidify and the nitrogen pad in the rail car was vented to slow the leak. Dikes were constructed around the rail car to contain the spilled material and all storm drains and catch basins. BASF conducted air monitoring for MDI with chemical specific monitors at and around the spill location and did not detect any vapors or mists. MDI reacts readily with water to form polyurea compunds and carbon dioxide. This combined with the low vapor pressure, teh cold temperature and the high humidity/rain contributed to the lack of vapors and minimized hazardous nature of the release.

Environmental Quanlity Industrial Services was contracted to conduct the

remediation. Leaking material was collected in totes and the rail car was off loaded into a empty rail car. The rail car was then moved to a separate location to be decontaminated prior to inspection. The impacted rail, railroad ties and ballast was excavated and transported off-site for disposal. Impacted water was pumped out of the excavation and also transported off-site for disposal.

The excavation has been filled and new track is in place and the loading/off loading rack in back in operation.

Planned Removal Actions
Disposal of drums containing MDI impacted sorbent material.

Next Steps
None

Key Issues
None

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
Intramural Costs				
Total Site Costs	$0.00	$0.00	$0.00	0.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.net/WyandotteBASFspill